UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/477,021	01/03/2000	ANIL KUMAR CHANDRUPATLA	CISCO-1340	8615

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EXAMINER
NGUYEN, CHAU T

ART UNIT	PAPER NUMBER
2176	19

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	**Applicant(s)**
Office Action Summary	09/477,021	CHANDRUPATLA ET AL.
	Examiner	**Art Unit**
	Chau Nguyen	2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 February 2004</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-66* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-66* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)./Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

1.   Amendment D, received on 02/06/2004, has been entered. Claims 1-66 are

presented for examination.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

3.   Claims 1-7, 25-29, 40, and 43-49 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Chuah et al., U.S. Patent No. 6,400,722 and further in view of Holt et

al., U.S. Patent No. 6,070,192.

4.   As to claim 1, Chuah discloses a method for centrally managing a computer

network, including of:

maintaining a central database of all NASes (Network Access Servers) known to

the computer network (col. 1, lines 29-54 and col. 9, lines 10-48: plural inter-working

function modules (IWFs) which are considered as network access servers (NASes) in

the network; and col. 33, lines 45-53, col. 39, lines 28-54: NASes are connected to a data center); and

broadcasting a message to a NAS list located at each POP (Point Of Presence) in the computer network whenever said central database is changed, said message containing information regarding the change (col. 1, lines 29-54 and col. 42, line 52 – col. 44, line 37).

However, Chuah does not disclose broadcasting a message from said central database to a NAS list. In the same field of endeavor, Holt discloses a data access transport system comprising a plurality of network access server (NASes) and a network controller 12 connected to the network servers (col. 3, line 64 – col. 4, line 26). Holt also discloses a list of NAS identifiers stored in the network controller (database), and in addition, Holt discloses the network controller 12 may send a status indication to one or more NAS (col. 10, lines 25-46, and col. 12, line 27 – col. 13, line 7). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Holt and Chuah to include broadcasting a message from said central data to a NAS list. Holt suggests that the network controller 12 send a status indication to the network access servers to updates its information.

5.   As to claim 2, Chuah and Holt (Chuah-Holt) disclose wherein all of the NASes known to the computer network are all NASes within the computer network which have been chosen as being valid (Chuah, col. 20, line 24 – col. 21, line 13: a password

authentication protocol (PAP authentication request is sent to the home NASes for validating).

6.   As to claims 3, Chuah discloses all the limitation as discussed above. However, Chuah et al. do not disclose said maintaining is performed by a Network Control Console. In the same field of endeavor, Holt et al. disclose a network controller comprises means for maintaining a record of tunnels currently connected between NASes and network gateways (col. 4, line 27 – col. 5, line 64). Since Chuah discloses the optimum route between the serving inter-working function (NAS) and the desired communication server is determined, which is similar to a data communications using network access servers (NASes) of Holt, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Chuah et al. and Holt et al. to include a network controller for maintaining a record of tunnels connected between NASes and network gateways because Holt et al. suggest that using network controller for deriving operational data from at least one of connection setup requests, connection setup responses, connection release requests, connection release acknowledgements and error conditions detected by the network controller.

7.   As to claim 4, Chuah and Holt (Chuah-Holt) disclose said Network Control Console is a graphical interface (Holt, col. 9, lines 50-61 and Fig. 2).

8.   As to claim 5, Chuah-Holt disclose said maintaining includes adding NASes,
deleting NASes, and modifying the entries of NASes in the central database as the
need arises (Holt, col. 5, lines 47-64 and col. 10, lines 36-46, Chuah, col. 10, line 49 –
col. 11, line 3).

9.   As to claim 6, Chuah-Holt disclose wherein said broadcasting is performed
automatically by a broker whenever a change to said central database is made (Chuah,
col. 19, line 42 – col. 20, line 5).

10.   As to claim 7, Chuah-Holt disclose wherein said broadcasting includes publishing
a broker event via a broker (Chuah, col. 19, line 42 – col. 20, line 5).

11.   Claims 25-29, 40, and 43-49 are corresponding apparatus and program storage
device claims containing similar limitations as discussed in the method of claims 1-7;
therefore, they are rejected under the same rationale.

12.   Claims 8-24, 30-39, 41-42, and 50-66 are rejected under 35 U.S.C. 103(a) as
being unpatentable over Holt et al., U.S. Patent No. 6,070,192 and further in view of
Chuah et al., U.S. Patent No. 6,400,722.

13.   As to claim 8, Holt discloses a method for locally processing an access request at a in a computer network, said access request received from a NAS, the method including:

accessing a list of network access servers (NASes) and the computer network (col. 10, lines 36-46); and

validating that said access request was received from a known entity by determining if an entry exists in said list for the NAS from which the access request was received (col. 10, lines 36-46).

However, Holt does not disclose said list of NASes known to the PoP and located locally at the PoP. In the same field of endeavor, Chuah discloses internet service provider (ISP) deploys and manages one or more points of presence (PoPs) in its service are to which end users connect for network service (col. 1, lines 29-54 and col. 9, lines 10-48). Since Holt discloses a data communications using network access servers (NASes), which is similar to the optimum route between the serving inter-working function (NAS) and the desired communication server is determined of Chuah, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Holt an Chuah to include one or more points of presence (POPs) in service of ISP because Chuah suggests that by providing more points of presence, end users access the ISP by dialing the nearest POP and running a communication protocol known as point-to-point protocol (PPP).

14.   As to claim 9, Holt and Chuah (Holt-Chuah) disclose retrieving a user record from a database of user records located locally at said PoP, said database of user records containing records for those users who have been identified as having the PoP as their home PoP (Chuah, col. 10, line 33-45 and col. 11, lines 21-42).

15.   As to claim 10, Holt-Chuah disclose each entry in said list contains a field identifying a NAS and a field identifying a dictionary of attributes supported by the corresponding NAS (Holt, col. 9, lines 15-49 and col. 12, line 64 –col. 13, line 7)..

16.   As to claims 11 and 15, Holt-Chuah disclose wherein said dictionary of attributes is a RADIUS (Holt, col. 9, lines 15-49; Chuah, col. 27, lines 25-53).

17.   As to claim 12, Holt-Chuah disclose wherein said each entry in said list contains fields for:

    a domain name of a NAS (Chuah, col. 27, lines 25-53: NAS-IP-Address);

    a vendor name of the NAS (Chuah, col. 27, lines 25-53: AP-IP-Address, or AP-MAC-Address);

    a shared secret between all known NASes and AAA servers in the network (Chuah, col. 25, lines 46-49 and col. 27, lines 25-53: user password attribute); and

    a dictionary name, said dictionary name indicating a dictionary of attributes supported by said NAS (Chuah, col. 27, lines 25-53: Xtunnel Protocol Parameters).

18.   As to claim 13, Holt-Chuah disclose wherein said validating further includes validating that said access request was received from a known entity by determining if the domain name that the access request was received from matches the domain name field of any entry in said list (Chuah, col. 35, line 36 – col. 36, line 67).

19.   As to claim 14, Holt-Chuah disclose wherein said validating further including examining whether a password supplied with said access request matches the shared secret field of a corresponding entry in said list if the domain name that the access request was received from matches the domain name field of any entry in said list (Chuah, col. 33, lines 16-26).

20.   As to claim 16, Holt-Chuah disclose wherein said accessing and validating are performed by an Authentication, Authorization, and Accounting (AAA) server (Holt, col. 7, line 60 – col. 8, line 37).

21.   As to claim 17, Holt-Chuah disclose subscribing to a broker event to update said list whenever NAS known to the computer network is added, deleted, or modified (Holt, col. 5, lines 47-64 and col. 10, lines 36-46, Chuah, col. 10, line 49 – col. 11, line 3).

22.   As to claim 18, Holt discloses a method for handling an access request at a PoP, said access request generated by a user logging on to said PoP, said user having a home PoP, the method including:

accessing a list of network access servers (NASes) and known to the computer network (col. 10, lines 36-46, col. 17, line 44 – col. 18, line 25 and Fig. 15: consider a case of a user who roams from one place (Chicago) to another (Hong Kong); if the user's home network, IWF (NAS) is in Chicago, and the user registers using a wireless service provider in Hong Kong, then the all data will be relayed from Hong Kong to Chicago and vice versa. Thus, home IWF (NAS) in Chicago is known to serving IWF (NAS) in Hong Kong and vice versa, therefore all NASes known to the computer network); and

validating that said access request was received from a known entity by determining if an entry exists in said list for the NAS from which the access request was received (col. 10, lines 36-46).

determining if said user's home PoP is said PoP (col. 10, lines 10-46);

forwarding said access request to an AAA server located at said PoP if said user's home PoP is said PoP (col. 10, line 10 - col. 11, line 36);

However, Holt does not disclose said list of NASes known to the PoP and located locally at the PoP. In the same field of endeavor, Chuah discloses internet service provider (ISP) deploys and manages one or more points of presence (PoPs) in its service are to which end users connect for network service (col. 1, lines 29-54 and col. 9, lines 10-48). Chuah also discloses determining if said user's home PoP is said PoP (col. 1, lines 29-54 and col. 19, lines 5-28: the registration server uses User-Name from the user registration agent (user's home PoP) to determine the end system's home network). Since Holt discloses a data communications using network access servers (NASes), which is similar to the optimum route between the serving inter-working

function (NAS) and the desired communication server is determined of Chuah, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Holt an Chuah to include one or more points of presence (POPs) in service of ISP because Chuah suggests that by providing more points of presence, end users access the ISP by dialing the nearest POP and running a communication protocol known as point-to-point protocol (PPP).

23.   As to claim 19, Holt-Chuah disclose wherein said determining, forwarding, and relaying are performed by a Protocol Gateway (Holt, col. 9, lines 15-49)

24.   As to claim 20, Holt-Chuah disclose wherein said determining includes examining a user name entered by said user (Chuah, col. 19, lines 5-28).

25.   As to claim 21, Holt-Chuah disclose wherein said determining further includes parsing said user name to reveal a PoP location indicated within said user name (Chuah, col. 34, lines 18-28).

26.   As to claim 22, Holt-Chuah disclose wherein said PoP location indicated within said user name is a city name as a prefix to said user name (Chuah, col. 26, lines 7-48 and col. 34, lines 18-28).

27.   As to claim 23, Holt-Chuah disclose wherein said PoP location indicated within said user name is an abbreviation for a city name contained within a domain name affixed to the end of said user name (Chuah, col. 26, lines 7-48 and col. 34, lines 18-28).

28.   As to claim 24, Holt-Chuah disclose wherein said determining further includes parsing said user names to reveal a domain name, said domain name indicating an ISP in control of said home PoP (Chuah, col. 26, lines 7-48 and col. 34, lines 18-28). Holt discloses a data access transport system comprising a plurality of network access server (NASes) and a network controller 12 connected to the network servers (col. 3, line 64 – col. 4, line 26). Holt also discloses a list of NAS identifiers stored in the network controller (database), and in addition, Holt discloses the network controller 12 may send a status indication to one or more NAS (col. 10, lines 25-46, and col. 12, line 27 – col. 13, line 7).

29.   Claims 30-39, 41-42, and 50-66 are corresponding apparatus and program storage device containing similar limitations as discussed in the method of claims 8-24; therefore, they are rejected under the same rationale.

Response to Arguments

30.   In the remarks, Applicant argued in substance that

(A) Prior art does not disclose a central database of all NASes.

As to point (A), Chuah discloses The POPs and the ISP's data center 14 are connected

together over the intranet backbone through router 12A (col. 1, lines 29-54, col. 9, lines

10-48: plural inter-working function modules (IWFs) which are considered as network

access servers (NASes) in the network; and col. 33, lines 45-53, col. 39, lines 28-54).

In the same field of endeavor, Holt discloses a data access transport system comprising

a plurality of network access server (NASes) and a network controller 12 connected to

the network servers (col. 3, line 64 – col. 4, line 26). Holt also discloses a list of NAS

identifiers stored in the network controller (database), and in addition, Holt discloses the

network controller 12 may send a status indication to one or more NAS (col. 10, lines

25-46, and col. 12, line 27 – col. 13, line 7).

(B) Prior art does not disclose accessing of a list of NASes known to the PoP and the

computer network, the list located locally at the PoP.

As to point (B), Chuah discloses internet service provider (ISP) deploys and manages one or more points of presence (PoPs) in its service are to which end users connect for network service (col. 1, lines 29-54 and col. 9, lines 10-48).

(C) Chuah still does not disclose all NASes known to the computer network.

As to point (C), Chuah discloses in col. 17, line 44 – col. 18, line 25 and Fig. 15: consider a case of a user who roams from one place (Chicago) to another (Hong Kong); if the user's home network, IWF (NAS) is in Chicago, and the user registers using a wireless service provider in Hong Kong, then the all data will be relayed from Hong Kong to Chicago and vice versa. Thus, home IWF (NAS) in Chicago is known to serving IWF (NAS) in Hong Kong and vice versa, therefore all NASes known to the computer network.

(D) The Office Action's allegations in the Response to Arguments section are contradictory to the Office Actions allegations in the body of the rejection. Which piece of prior art allegedly teaches a central database of all NASes known to the computer network? Is it Chuah or Holt? (page 19 of 23).

As to point (D), applicant's argument is based on the argument "Prior art does not disclose a central database of all NASes" in the Amendment C, received on 08/11/2003. First of all, the limitation " a central database of all NASes" in claim 1,

which is rejected under 35 U.S.C. 103(a) as being unpatentable over Chuah et al., U.S.

Patent No. 6,400,722 and further in view of Holt et al., U.S. Patent No. 6,070,192.

Since the grounds of the rejection are based on two references Chuah et al. and Holt et

al., it is not necessary to have only one reference including "a central database of all

NASes", either Chuah et al. reference or Holt et al. reference teaches "a central

database of all NASes" or maybe both do teach "a central database of all NASes". In

this case, the Examiner pointed out that Chuah discloses The POPs and the ISP's data

center 14 (central database) are connected together over the intranet backbone through

router 12A (col. 1, lines 29-54, col. 9, lines 10-48: plural inter-working function modules

(IWFs) which are considered as network access servers (NASes) in the network; and

col. 33, lines 45-53, col. 39, lines 28-54). Also, in the same field of endeavor, Holt

discloses a data access transport system comprising a plurality of network access

server (NASes) and a network controller 12 connected to the network servers (col. 3,

line 64 – col. 4, line 26). Holt also discloses a list of NAS identifiers stored in the

network controller (database), and in addition, Holt discloses the network controller 12

may send a status indication to one or more NAS (col. 10, lines 25-46, and col. 12, line

27 – col. 13, line 7).

(E) Applicant is unclear how the fact that the network controller sends a status update to

a NAS is equivalent to a central database broadcasting a message to a NAS list. The

Patent Office is apparently confusing a NAS (as shown in Holt), with a NAS list located

at each PoP. These are not equivalent structures. One is a device (a NAS), and one is

a list of devices (NAS list).

As to point (E), Holt discloses a data access transport system comprising a

plurality of network access server (NASes) and a network controller 12 (a central

database) connected to the network servers (col. 3, line 64 – col. 4, line 26). Holt also

discloses a list of NAS identifiers stored in the network controller (the central database),

and in addition, Holt discloses the network controller 12 may send a status indication to

one or more NAS, and if information stored at network controller is not accurate, the

network controller updates its information and may send another status indication to one

or more NASes requesting more detailed information (col. 10, lines 25-46, and col. 12,

line 27 – col. 13, line 7).

(F) Holt does not teach or suggest accessing a list of NASes known to the PoP and

known to a computer network containing the PoP.

As to point (F), Holt discloses a network controller that corresponds to a plurality

of NASes (col. 3, lines 64-67, col. 4, lines 12-30, col. 4, line 67 – col. 5, line 6). Thus,

the list of NASes is known to the PoP and also known to computer network containing

the PoP.

(G) There is no motivation in either Chuah or Holt to extend the list of NASes outside of the local realm of control.

As to point (G), Chuah discloses all NASes known to the computer network in col. 17, line 44 – col. 18, line 25 and Fig. 15: consider a case of a user who roams from one place (Chicago) to another (Hong Kong); if the user's home network, IWF (NAS) is in Chicago, and the user registers using a wireless service provider in Hong Kong, then the all data will be relayed from Hong Kong to Chicago and vice versa. Thus, home IWF (NAS) in Chicago is known to serving IWF (NAS) in Hong Kong and vice versa, therefore all NASes known to the computer network. Thus, the motivation of Chuah for discloses all NASes known to the computer network is for roaming purpose.

Besides, Holt suggests that the network controller 12 send a status indication to the network access servers to updates its information (col. 12, lines 64 – col. 13, line 7).

31.   Applicant's arguments and amendments filed on 02/06/2004 have been fully considered but they are not deemed fully persuasive.   Please see Response to Arguments and Office Action above.

THIS ACTION IS MADE FINAL.   Applicant is reminded of the extension of time policy

as set forth in 37CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action.   In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action.   In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Chau Nguyen whose telephone number is (703) 305-

4639. The examiner can normally be reached at 8:00 am – 5:00 pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Joseph Feild can be reached on (703) 305-9792.   The fax phone numbers

for the organization where this application or proceeding is assigned are (703) 872-

9306. Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 305-

3230.

Any response to this final action should be mailed to:

Box AF

Commissioner of Patents and Trademarks

Washington, D.C. 20131

Or Faxed to:

(703) 872-9306, (for **formal communications**; please mark

"EXPEDITE PROCEDURE").

Or:

(703) 746-7240 (for **informal or draft communications**, please label

"PROPOSED" or "DRAFT").

Or:

(703) 872-9306 (for **After Final Communications**).

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal

Drive, Arlington, VA., Sixth Floor (Receptionist).

Chau Nguyen
Patent Examiner
Art Unit 2176

JOSEPH FEILD
SUPERVISORY PATENT EXAMINER